ERIC Project

Final Report

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CASE STUDIES OF SCHEDULED TRIBE FAILURE STUDENTS AT MIDDLE AND MATRICULATION LEVELS IN HIMACHAL PRADESH

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PREFACE

Equality of educational opportunity for all the sections of our society diversified in terms of caste, religion, language and culture; and stratified in terms of social and economic ways of life is one of the provisions made in the Indian Constitution. With scientific and technological advancement and modernization some groups in the society have benefitted in many ways, especially in education and employment. However, there are certain groups of people who have remained neglected due to being the inhabitats of deep forests in the remote, plain and hill regions. The tribal communities constitute a major chunk of these groups. As they are socially and economically backward, the government is providing them a number of facilities and incentives for their uplift with a purpose to bring them at par with other privileged sections of the society. Consequently a considerable progress has been made by the people belonging to these communities including the education of their children.

Inspite of all the efforts by the government and other voluntary agencies, the majority of the schools going children, especially in the age group of 6-14 years, are unable to realize their academic potentials because of being the first generation learners. This fact has also been acknowledged in the status paper on 'Challenge of Education - A Policy Perspective'. Moreover, the majority of these tribal school going children drop-out from the schools before completing their primary or secondary education due to failure in one or the other terminal examination.

A number of tribal communities reside in the remote hill areas of the districts of Kullu, Kinnaur, Chamba and Lahaul-Spiti of Himachal Pradesh. Some parts of these areas remain snowbound and inaccessible for major part of the year. Since no attempt has systematically been made to identify the variables related to the failure of the tribal children in school examinations, the present study was conducted to find out the intellectual and personality variables which contribute significantly to failure among these children in different terminal examinations. This study has revealed that the tribal failure students are comparatively low in their intellectual abilities, i.e., intelligence and creative thinking , low in organizational ability; lacking the ability to concretize their experiences with lo level of aspiration and self-concept; high anxiousness and and feeling of insecurity; less adjusted in the areas of social, emotional and educational adjustment; and coming from low socio-economic status with poor study habits. Some concrete suggestions with educational implications have been laid down to improve upon the existing situation pertaining to the school education in the tribal areas of the state.

Appreciations are due to Dr. Kulwinder Singh who worked as Research Fellow in the project from the very beginning. He worked very hard throughout the project and was able to collect the requisite data from the tribal areas with difficult geographical terrain inspite of a lot of physical discomforts.

He has been instrumental in the completion of the project even after joining Post-Doctoral Fellowship in the Department of Education. Thanks are also due to Mr. Kartar Singh Thakur who worked in the project as Research Fellow in place of Dr. Kulwinder Singh towards the end of the project.

I am grateful to Educational Research and Innovations Committee (ERIC), National Council of Educational Research and Training, New Delhi for sanctioning this research project and providing financial grant for two years.

I shall be failing in my duty if I do not put on record my gratitude to the heads of the institutions and teachers working in the tribal areas of Pradesh for their co-operation in the conduct of the study and also to the children from whom the requisite data for the study were collected. Special indebtedness is acknowledged to Government of Himachal Pradesh and Himachal Pradesh University, Shimla without whose active co-operation this work would have remained incomplete.

Lastly, I am thankful to Sh. Bishan Singh Chandel and Sh. Bansi Ram Chandel of the Department of Education for their active co-operation and help in the typing and cyclostyling of the report.

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CHAPTER I

INTRODUCTION

Education is one of the basic requirements of every child. Since independence a number of efforts have been made to provide free and compulsory education to all children upto the age of 14 years. But it is a common experience that all children who begin going to school are not able to complete even the primary education. Further, many more among those who complete the primary education leave the school before reaching high or higher secondary stage. According to the statistics of the Union Ministry of Education (1981-82) it is estimated that approximately 60 per cent of the children who enrol in class I drop-out of the school before they reach class V and only 12 per cent are able to reach class X. It is the wastage of both financial and human resources in the process of education when most of the children leave the school before the completion of desired educational level.

Failure of the students in the terminal examinations may be due to many reasons. Some children are not able to keep pace with the progress made by other children in the class due to their low mental abilities. In most of the cases the school going children are 'first generation learners', their parents being illiterate are not able to realize the importance of education. Such children do not feel like going to school and doing home work due to lack of motivation on the part of the parents. Thus the lack of academic atmosphere in their homes leads to their failure in the examination. Poverty also plays an important role in preventing

the children completing the school education. The parents are not economically so sound to be able to provide their children the books and other necessry facilities. Lack of such facilities deprive children of the congenial environment in the school which leads to their failure in the terminal examination and these children never care to come again to the schools for continuing their education. Moreover, due to poverty the children are economic assets for their families as they help their parents or guardians in their family occupations such as agriculture, labour etc. Parents also find no immediate return from the expenditure being incurred on their education and want their wards to work and earn instead of going to school. It is also experienced that a number of school going children are not regular in attending their classes and spend the time in play or merry-making. After failure they are neither interested to join the same class again nor they are persuaded by any one at home to continue education. In this way these children leave the school before completing the desired educational level and joing the labour force to become earning members in their families.

1-1 BACKGROUND OF THE PROBLEM

A number of studies have been conducted to study the relationship of the cognitive and non-cognitive variables alongwith environmental factors with academic success or failure of the students at terminal examinations. Adaval et al. (1961) in a study into the causes of failure in High school examination found that the students are unable to make the optimum use of their

potentialities due to many personal problems which seem to be the result of retarded mental development, physical handicaps and emotional disturbances. It was also revealed that majority of such students are introverts, below average in intelligence and have unsatisfactory ego-organisation . The students were found to be facing difficulties at home due to unpleasant atmosphere, conflict with family members, lack of interest in education on the part of the family members and burden of household duties. Bhatnagar (1967) while predicting academic achievement of high school students from personality variables found that need for achievement, autonomy, intraception, succorance, dominance, nurturance, endurance and aggression correlated positively, and need for deference, affiliation and abasement correlated negatively to their academic achievement. Koul (1969) found that high achievers in mathematics are more intelligent, realistic, stodgy and dominant with high ego-strength and liking group actionwhen compared to low achievers. After making a factor analysis, the differentiating traits of high achievers were reduced to three factors, namely, the factor of 'venturesomeness', 'self-confidence' and 'ability and preservance' (Koul, 1978). Dhaliwal (1971) studied the personality correlates of academic success-failure among high school students and revealed that inferior study habits, outgoing tendencies, low verbal ability, emotional instability, assertiveness, happy-go-lucky temprament, poor adjustment in home, emotional and school areas, good social adjustment and insecurity feelings are associated with academic failure. Saxena (1972) found underachievers to be meek, submissive, timid, brooding and dependent type of immature individuals

as compared to overachievers who were found to be having aspiration for higher achievement, sufficient endurance and capacity for fighting out their case. It was further revealed that underachievers are burdened by a number of problems, have poor study habits and are unaware of their actual difficulties. Age factor also showed negative relationship with achievement. Sharma (1972) found overachievers to be better adjusted than underachievers in school, home, social, religious and miscellaneous areas of adjustment. Tiwari and Rai (1976) studied the differential personality correlates of high and low achievers at the same level of socio-economic status and found that high achievers are better adjusted than low achievers, significantly in the areas of emotional and educational adjustment but not in the area of social adjustment. High achievers were also found to be high in need-achievement than low achievers. Low achievers were found to be below average in intelligence and more anxious than high achievers who were found to be above average in intelligence but low in anxiety. In a study sponsored by NCERT (1977), it was found that first generation learners belonging to low socio-economic status score low in language achievement, achievement in mathematics and reading readiness. Also, they were reported to be low in self-concept, moral problem and social responsibility as compared to the children having literate parents. Dutt (1978), in a study of adjustment of high and low achievers of both the sexes reported that high achievers are better adjusted educationally and emotionally, but not socially. Narotra (1980), in a correlational study of academic

achievement with socio-economic status, security-insecurity and problems of students, found significantly positive correlation between socio-economic status and academic achievement which got reduced to negligible when effects of security-insecurity and problem of study were partialled out. Insecurity was found to be having significantly negative correlation, after partialling out the effects of socio-economic status and problems of students. Problems with regard to academic matters, mates and teachers were found to be significantly contributing to academic achievement negatively while problems with regard to miscellaneous conditions of school and self are negatively, but not significantly contributing to academic achievement. Harmohan (1981) reported that students with internal locus of control show better academic performance than those with external locus of control and also that low anxious subjects have better academic performance than high anxious subjects. Singh (1981) found academic achievement of high school students positively and significantly related with creative thinking, even when the effect of intelligence was partialled out. It was also reported that academic achievement is significantly related, positively with socio-economic status and negatively with neuroticism-stability and test anxiety. Krishnan (1982) revealed significant differences in school achievement of pupils belonging to high average and low socio-economic status. The students belonging to high and average socio-economic status differed significantly from their counterparts with low socio-economic status in their school achievement. Bhargava and Marwaha (1982) found that deprivation in its social,

cultural and economic parameters causes retardation in academic performance of the students.

All these studies reveal that various socio-psychological and environmental factors do influence the academic failure or underachievement among Indian high school students at different examination levels. But these studies have been conducted on the non-tribal populations who have better physical facilities and environment in comparison to tribal schoolgoing children. In tribal areas, most of the modern facilities enjoyed by others in other parts of the country are yet to reach. The tribal people, in general, still live a life of their own uninfluenced by the outside world.

Since independence the tribal communities are given many incentives by the central and state governments so as to fulfil the constitutional obligation of compulsory, free and universal education of children in the age group of 6-14 years and bring them at par with the non-tribal children. Some concessions in the form of reservations in the institutions of technical, medical and higher education and also in employment have also been provided to these tribal people so that the children of these deprived groups may be able to enter the mainstream of national life through all possible ways by channelizing their inherent energies successfully for utilization to the maximum for the benefit of their own, to the social groups to which they belong, and to the nation. But the tribal children have not been able to benefit fully inspite of all these facilities and incentives. It is more astonishing that most of

them fail either in one or the other examination and are forced to leave the school without completing even the primary education. Further, a large number of the tribal students after completing the primary education fail consistently before reaching the high school stage. This phenomenon leads to the wastage of human and financial resources.

The studies described earlier have identified certain factors which contribute to the failure among the school going children. But all these studies are very general in nature and throw no light on the factors, both cognitive and non-cognitive, that lead to the failure or underachievement among tribal children. Therefore, they are not very much relevant to the educational purposes so far as the failure of the tribal children is concerned. However, there are a few investigations that are worthmentioning in the context of the failure of the tribal school going children in different parts of the country. Burman (1969) enumerated certain socio-cultural factors which are responsible for the failure of the tribal students belonging to the north eastern, central and western regions of the country. Verma (1977) in a comparative study of achievement of tribal and non-tribal children in science at high school level found that tribals have low achievement due to language problem, unacquaintance with the subject matter and irrelevance of the curricula in catering to their own needs and aspirations. Chaudhary (1974) studied the drop-out and stagnation in a tribal situation in Rajasthan and enumerated socio-economic and cultural problems which cause hinderance in the education of tribal children.

Rath(1976), in the study on the problems of equalization of educational opportunities for the tribal children of Orissa, found that personal adjustment, physical needs, aspirations and cognitive development create some difficulties in the education of the tribal children. It was also reported that teachers possess negative attitude towards the scheduled caste and scheduled tribe students irrespective of the fact that some of them are highly talented, and many more have average intelligence and academic achievement.

Rathnaiah (1977) while studying structural constraints in tribal education found that socio-economic constraints operate adversely in spread of education in the tribal society as maximum percentage of enrolment at primary and secondary stages is from upper socio-economic status, indicating that the parents from low socio-economic status can not afford to send their wards to schools. It was also revealed in the study that the attitude of tribals towards education is not antagonistic or unfavourable. But, most of the schools, being single teacher schools, provide inadequate instructions in the initial stages and thus students face difficulty in English and Mathematics in higher classes. Further, it was pointed out that a large number of students abstain from classes due to lack of interest in education, ill health and lack of persuation by the parents to their wards to be regular in their studies. It was also found that majority of the parents of the school going children want their wards to study only upto primary level whereas the children themselves want to get education upto matric to seek employment.

Toppo (1979) while studying the development of education among Oraon tribals of Bihar found that lack of academic atmosphere at home and lack of continued interest of teachers in the tribal students are responsible for their academic failure. Kumar and Murali (1979) in a comparative study found that though caste does not seem to affect the educational development, but performance of non-scheduled caste/ scheduled tribe students is higher than that of their counterparts in psycho-linguistic performance and educational aspiration. It was also revealed that children with better educational background at home have higher psycho-linguistic performance and educational aspiration than the children with poor educational background. Khan (1979) reported that parental deprivation, when the children reside in hostels away from parents, has an adverse effect on the academic achievement of the denotified tribal students of Uttar Pradesh coming from low socio-economic status. Sreedharaswami (1980) while reviewing 'comprehensive access to primary education observes that economic backwardeness and low per capita income of parents do not leave any alternative than from pressing their children into workforce, leading to wastage and stagnation, particularly among the rural, tribal and urban poverty areas. Pathy (1982) found that factors like students' attitude towards schools, irregular attendence and lack of interest or motivation in learning the subject matter are responsible for drop-out of the rural students in Orissa. Srivastava (1982), in a study of sociological problems in tribal education in Madhya Pradesh, found that the factors like family customs and traditions, parents' illiteracy, fatalistic

approach to the education of their children and behaviour of upper caste people and outsiders living in the tribal areas towards tribal people are major hinderances in the educational progress of tribals. Sharma (1983) also studied the educational backwardness of the tribal students of Madhya Pradesh and reported that large family size, scaracity of funds and meagre means of living make it difficult to look further than their day to day needs, thus being responsible for low literacy among them. The illiteracy provides no academic atmosphere at home to provide them guidance and coaching, especially in the subjects of mathematics and science which they find too difficult. Also, the tribal student finds himself cut-off both from original and adopted social circles while studying and is tempted to leave the studies so as to opt for traditional household works in his community.

Singh (1983), while studying parental support and scholastic achievement of tribal Hindu/Sarna and Christian and non-tribal Hindu children of Bihar, on the basis of the data of three doctoral theses, reports that parental support is a more powerful correlate of scholastic achievement than socio-economic status and intelligence within average range, and parental support has also been found to compensate for low socio-economic status. Digumarti (1983), while discussing the problems of tribal communities, in general, reports that illiterate parents hardly encourage their children for education which may be attributed to the negative attitude and apathy towards education.

1-2 THE PROBLEM

A perusal of the above mentioned studies shows that these have been conducted in different tribal situations of the country other than Himachal Pradesh and their findings are relevant to the tribal students of the respective regions. But findings of these studies cannot be applied in toto to the tribal children of the state of Himachal Pradesh who have their own unique culture, customs, traditions and way of life. Furthermore, no endeavour appears to have been made to probe into the causes of failure among tribal students of Himachal Pradesh in different public examinations. It is being experienced that most of the tribal students enrolled in class I drop-out at one or the other stage before the completion of school education due to a number of factors like abject poverty and social apathy towards education aswell as due to their consistent failure in one of the public examinations at middle or matriculation level. It has also been observed that the rate of failure among the tribal students in the public examinations is much more in comparison to that of non-tribal students of the state. Moreover, there are a number of tribal groups in the state living in a state of isolation for the last many centuries, due to difficult geographical terrain, have developed their own unique mode of life. Though these tribes differ from one another in some respects, they face the similar problems of adjustment to the modernization with a threat to their culture, values and life style from the outside world. With equal opportunities of education for all, the tribal children are also confronted with a number of personal,

psychological, social and economic problems that affect their academic performance adversely. Thus, it was thought worthwhile to study the causes of the failure of the tribal students at middle and matriculation examinations by selecting the failure cases from different tribes who have consistently failed (twice or more than twice) in either of these two public examinations. In addition, it was also felt to be more useful to select some extreme cases among the consistent failures for carrying out a depth study by making use of case study method.

The number of such cases, though small, constituted a good sample of the children belonging to tribal communities for empirically establishing the causes of failure among them alongwith exploring the specific or unique causes which are responsible for the failure of these students in the process of education. Keeping in view the above observations the following problem was undertaken for research:

CASE STUDIES OF SCHEDULED TRIBE FAILURE STUDENTS AT MIDDLE AND MATRICULATION LEVELS IN HIMACHAL PRADESH

1-3 SIGNIFICANCE OF THE STUDY

Tribal communities have been living in isolation for centuries. Due to this isolation, they are unique in a number of socio-cultural aspects, distinctive traditions, ways of life , emotional responses and aptitude patterns. Anastasi (1958,p.550) is also of the view :

> The geographical and social isolation which leads to race formation is very likely to be associated with cultural diversification. Cultural factors often account for group isolation in the first place, and any form of isolation tends to preserve and augment cultural differentiation.

Also, it is an established fact that each culture or sub-culture fosters the development of a different pattern of abilities, and performance of the individuals in academic and professional persuits. A number of studies, as mentioned earlier, have been conducted by comparing one tribal community with the other as well as with the non-tribal communities on certain intellectual, personal, social and environmental factors. But all these studies have been carried out on the tribal populations in different parts of the country other than Himachal Pradesh. As Anastasi (1958) is of the view that the psychological studies conducted in a particular culture or social setting are not applicable to the other cultures or social settings in toto, the findings concerning the causes of failure among different communities belonging to other parts of the country cannot be applied as such in the tribal situation of the state of Himachal Pradesh.

Moreover, Himachal Pradesh is a hilly state with diverse tribal population inhabiting in the remote areas which are still inaccessible due to difficult geographical terrain. Their isolation from the outside world has led to the development of a closed tribal society with their own customary laws, and traditional vocations, too meagre to serve their basic needs. They have no means to utilize the vast natural resources they possess. The poverty has forced their family members including children to go

out for manual work to earn their livelihood. Adults, being illiterate, are not interested in sending their wards to school for education. Even if some of them go to school, they fail to attain minimum level of literacy. There is no doubt in the fact that these tribal are born with the same inherent potentialities as the children belonging to the non-tribal segment of population and there may be certain specific factors, namely, intellectual, personal, social or environmental which might be affecting the academic achievement of tribal students and contribute to their consistent failure in the terminal examinations. Thus, the findings of the present study would be of great educational significance for the teachers educators and administrators who are directly concerned with the education of the tribals in Himachal Pradesh.

1-4 OBJECTIVES OF THE STUDY

The objectives of the present study are stated as under:

(1) To identify the students from the different tribes of the state who had failed consistently in Middle or Matriculation examination.

(2) To identify the students from different tribes of the state who had passed middle/matriculation examination in the first or second attempt.

(3) To compare the two groups of students identified under the objectives (1) and (2) on the following cognitive variables:

(i) Verbal intelligence
(ii) Non-verbal intelligence
(iii) Verbal creative thinking
(iv) Non-verbal creative thinking

(4) To compare the two groups of students identified under the objectives (1) and (2) on the following non-cognitive variables :

(i) Age
(ii) Family history
(iii) Socio-economic status
(iv) Personality adjustment
(v) General anxiety
(vi) Test anxiety
(vii) Study habits
(viii) Security-insecurity
(ix) Self-concept
(x) Personality needs

(5) To conduct case studies of significant failure and pass students.

1-5 HYPOTHESES

The hypotheses formulated in the present study for testing the objectives are stated as under:

(1) The tribal students who had failed consistently in middle/ matriculation examination will differ from those who had passed the middle/matriculation examination in the first

or second attempt on the following cognitive variables:

(i) Verbal intelligence
(ii) Non-verbal intelligence
(iii) Verbal creative thinking
(iv) Non-verbal creative thinking.

(2) The tribal students who had failed consistently in middle/matriculation examination will differ from those who had passed the middle/matriculation examination in the first or second attempt on the following non-cognitive variables:

(i) Age
(ii) Family history
(iii) Socio-economic status
(iv) Personality adjustment
(v) General anxiety
(vi) Test anxiety
(vii) Study habits
(viii) Security-insecurity
(ix) Self-concept
(x) Personality needs

(3) The tribal students who had failed consistently in middle/matriculation examination will differ from those who had passed the middle/matriculation examination in first attempt in the personality characteristics as revealed by Rorschach Psycho-diagnostic test.

1-6 DELIMITATIONS

The present study was delimited in the following aspects :

(1) The study was confined to the students studying in grades IX, X and XI/P.U.C. examination in the first or second attempt.

(2) In case of consistent failures, the study was restricted to the following categories of children:

(i) those children who had failed twice or more than twice in middle standard examination and were continuing their studies in VIII, IX or X grades.

(ii) those children who had failed in matriculation examination twice or more than twice, and were continuing their studies in X grade as private candidates.

(iii) Only 27 failure and 33 pass students were selected for case studies.

1-7 OPERATIONAL DEFINITIONS OF THE TERMS

Certain terms have been used in the topic of research and in the report of the study with specific meanings which are as under:

(i) Tribal Students

It connotes the students belonging to a particular segement of population which has been declared backward, economically and socially by the Government of India.

(ii) Failure Students

Those students who had failed consistently twice or more

than twice at either middle or matriculation level, and were continuing their studies in grades VIII, IX & X or in the capacity of private candidates.

(iii) Pass Students

Those students who had passed the middle or matriculation examination in the first or second attempt and were continuing their studies in the grades IX, X and XI/ P.U.C.

CHAPTER II

METHOD AND PROCEDURE

2-1 METHOD

Normative survey method of research was used to identify the two groups of students, one who failed consistently either at middle or matriculation examination (twice or more than twice) and the other who passed the middle or matriculation examination in the first or second attempt for collecting necessary data on the selected cognitive and non-cognitive variables for comparison to establish the differences, if any, on these variables.

Case study method was also employed to cross-validate the results obtained by the comparison of the two groups by conducting intensive depth studies of the significant cases using Rorschach Psycho-diagnostic test.

2-2 SAMPLE

The sample for the present study consisted of 109 consistent failure cases and 116 pass cases belonging to both sexes of the tribal communities inhabitating in the districts of Chamba, Lahaul and Spiti and Kinnaur of Himachal Pradesh. It may be pointed out that all the pass students were continuing their education at the time of data collection, whereas in the failure group, 74 students were continuing their studies in grades VIII, IX and X, and the remaining 35 students (21 failing at the middle standard examination and 14 at the matriculation examination) were not attending any school and were continuing their studies in the capacity of private

candidates. The gradewise and sexwise distribution of the sample is presented in the Table 2.1 .

Table 2.1

Gradewise and Sexwise Distribution of Failure and Pass Tribal High School Students

Group	Class				Total
	VIII		X		
	Boys	Girls	Boys	Girls	
Failure*	43	22	29	15	109
Pass	38	24	31	23	116
Total	81	46	60	38	225

*Includes the drop-out students also

2-3 TOOLS

Following research tools were used in the present study for the purpose of data collection:

1. Verbal and Non-verbal Tests of Creative Thinking

To measure creative thinking, verbal and non-verbal tests of creative thinking developed in the Department of Education , H.P.University for high school students of Himachal Pradesh Singh (1981) were used. The brief description of verbal and non-verbal tests of creative thinking alongwith the scoring procedure is given in Appendix-I.

2. Jalota's General Mental Ability Test (Hindi Version)

Verbal intelligence was measured by using Jalota's General Mental Ability Test (GMAT).

3. Raven's Standard Progressive Matrices (SPM)

Non-verbal intelligence was measured by Raven's standard Progressive Matrices, a culture fair test.

4. Self-Concept Scale for Children by Singh and Singh (1977) was used to measure self-concept.

5. Hindi Version of Maslow's Security-Insecurity Scale by Singh (1973) was used to measure security-insecurity.

6. Study Habits Inventory by Patel (1975) was used to seek information about study habits.

7. Sinha's Comprehensive Anxiety Test (SCAT) by Sinha & Sinha was used to measure the manifest anxiety.

8. Hindi Version of Sarason's Test Anxiety Scale by Nijhawan (1972) was used to obtain scores of the selected tribal students under testing situations.

9. Adjustment Inventory by Singh and Singh (1968) was used to measure social, emotional and educational adjustment.

10. Socio-Economic Status Scale Questionnaire was developed to seek information about family background, material possessions and socio-psychological indicators. The summary of the development of the scale alongwith the scoring procedure is given in Appendix-II.

11. Thematit Apperception Test by Murray, adapted by Uma Chaudhary in Indian context was used to assess some personality needs.

12. Rorschach Psycho-Diagnostic Test was used to identify the characteristic pattern of interrelationship between the individual's cognitive emotional systems and the major environmental contexts in which the selected groups of tribal students function.

2-4 COLLECTION OF DATA

The different research tools, namely Jalota's General Mental Ability Test, Raven's Standard Progressive Matrices, Verbal and Non-verbal Tests of Creative Thinking, Self-Concept Scale, Security-Insecurity Scale, Study Habits Inventory, Comprehensive Anxiety Scale, Test Anxiety Scale for Children, Adjustment Inventory, Socio-economic Status Scale Questionnaire and Thematic Apperception Test were administered on the selected failure and pass tribal students in small groups, and individually to those students who were out of school and were continuing their studies as private candidates to collect the requisite data on the variables of verbal and non-verbal intelligence, verbal and non-verbal creative thinking, self-concept, security-insecurity, study habits, general anxiety, test anxiety, adjustment (emotional, social and educational), socio-economic status and personality need needs respectively.

The data on different cognitive and non-cognitive variables were tabulated and organised for statistical analysis.

2-5 STATISTICAL ANALYSIS OF DATA

To achieve the objectives of the study, t-test was applied to test the significance of difference between mean performance of the failure and pass groups of tribal students on the selected cognitive and non-cognitive variables.

CHAPTER III

ANALYSIS AND INTERPRETATION OF DATA

3-1 INTRODUCTION

The present study was aimed at finding out the differences between the tribal students who had consistently failed at the middle standard or matriculation examination and those who had passed these public examinations in the first or second attempt in the cognitive and non-cognitive variables. To fulfil this objective, the data pertaining to a number of cognitive and non-cognitive variables obtained from the two groups of students as discussed in the previous chapter, were analysed to study the differences on the selected cognitive and non-cognitive variables. The data collected from some significant cases belonging to the two groups through the case study method, using Rorschach Psycho-Diagnostic Test, were also analysed. For the purpose of comparison between two groups, 't-test' was applied to test the significance of difference between the mean scores of the subjects on the selected cognitive and non-cognitive variables. The analysis and interpretation of data are discussed as under :

3-2 COMPARISON OF TRIBAL FAILURE AND PASS GROUPS OF STUDENTS ON COGNITIVE VARIABLES

The significance of difference between means of failure and pass tribal students on the selected cognitive variables of verbal and non-verbal intelligence as well as verbal and non-verbal creative thinking was tested separately.

3-2.1 Intelligence

The means and standard deviations of the failure and pass groups of tribal students on the verbal and non-verbal measures of intelligence alongwith standard error of difference between means and t-ratios are presented in the table 3.1.

Table 3.1

Means, Standard Deviations, Standard Error of Difference Between Means and t-Ratios for Failure (N=109) and Pass (N=126) Tribal Groups on Verbal and Non-Verbal Intelligence

Variable	Group	M	SD	SE_{dm}	t
Verbal Intelligence	Failure	37.34	11.14	1.51	2.94*
	Pass	41.78	11.97		
Non-Verbal Intelligence	Failure	25.75	8.62	1.12	1.26
	Pass	27.16	8.43		

*Significant at .01 level

The Table 3.1 shows that failure tribal students have mean scores of 37.34 and 25.75 on verbal and non-verbal intelligence as compared to the respective mean scores of 41.78 and 27.16 of pass tribal students. From the t-values given in the table, it is evident that the difference in the mean scores of verbal intelligence is significant at .01 level whereas the two groups did not differ significantly even at .05 level in case of non-verbal intelligence. Thus the hypothesis that the tribal students who had failed consistently in middle/matriculation examination will differ significantly from those who had passed the Middle/Matriculation examination in First or Second attempt was accepted in case of

verbal intelligence but rejected in case of non-verbal intelligence.

Interpretation

The tribal failure group of students has significantly low verbal intelligence in comparison to their pass counterparts, whereas both the groups have exhibited no significant difference in case of non-verbal intelligence. From these results, it may be interpreted that verbal intelligence contributes significantly in the academic achievement of tribal students. It is worthmentioning that Singh (1981), in his study on the non-tribal high school students of Himachal Pradesh, has also reported that verbal intelligence is significantly and positively related with academic achievement.

3-2.2 Creative Thinking

To find out the significance of differences between the mean scores of failure and pass groups of tribal students on various dimensions of verbal creative thinking namely, fluency, flexibility, originality and total verbal creative thinking as well as on non-verbal creative thinking, namely, elaboration, originality, redefinition and total non-verbal creative thinking, t-test was employed. The results for verbal creative thinking and non-verbal creative thinking are summarized in the Tables 3.2 & 3.3 respectively.

Table 3.2

Means, Standard Deviations, Standard Error of Difference Between Means and t-Ratios for Failure (N=109) and Pass (N=126) Tribal Groups on Different Dimensions of Verbal Creative Thinking

Variable	Group	M	SD	SE_{dm}	t
Fluency	Failure	32.95	11.03	1.48	3.16*
	Pass	37.63	11.59		
Flexibility	Failure	17.45	7.13	1.04	2.84*
	Pass	20.40	8.84		
Originality	Failure	12.59	4.01	0.53	0.49
	Pass	12.85	4.12		
Total Verbal Creative Thinking	Failure	62.99	20.34	2.76	2.86*
	Pass	70.88	21.89		

*Significant at .01 level.

Table 3.3

Means, Standard Deviations, Standard Error of Difference Between Means and t-Ratios For Failure (N.=109) and Pass(N=126) Tribal Groups on Different Dimensions of Non-Verbal Creative Thinking

Variable	Group	M	SD	SE_{dm}	t
Elaboration	Failure	17.46	6.50	0.84	0.26
	Pass	17.68	6.30		
Originality	Failure	17.46	8.17	1.01	4.05*
	Pass	21.55	7.15		
Redefinition	Failure	6.69	2.86	0.37	3.08*
	Pass	8.83	2.75		
Total Non-Verbal Creative Thinking	Failure	41.61	15.20	1.94	2.81*
	Pass	47.06	14.30		

*Significant at .01 level.

The Table 3.2 reveals that failure tribal students have the mean scores of 32.95, 17.45, 12.59 and [illegible]2.99 on the dimensions of fluency, flexibility, originality, and total verbal creative thinking respectively in comparison to the respective mean scores of 37.63, 20.40, 12.85 and 70.88 of pass groups of tribal students. The t-values computed on the basis of comparing these two groups on fluency, flexibility, originality and total verbal creative thinking came out to be 3.16, 2.84, 0.49 and 2.86 respectively. All these t-values, except in case of originality, are significant at .01 level.

Table 3.3 shows that mean performance of tribal failure students on the dimensions of elaboration, originality, redefinition and total non-verbal creative thinking are 17.46, 17.46, 6.69 and 41.61 respectively while those of pass students are 17.68 , 21.55 , 7.83 and 47.06. It is further evident from the table that the t-values comparing the two groups on the dimensions of elaboration, originality, redefinition and total non-verbal creative thinking came out to be 0.26, 4.05 , 3.08 and 2.81 respectively which , except in case of elaboration, are significant at .01 level.

Thus the hypothesis that the tribal students who had failed consistently in the public examinations differ in all the dimensions of verbal creative thinking (except in originality) and non-verbal creative thinking (except in elaboration) from those who had passed these examinations in the first or second attempt was accepted.

Interpretation

From these results, it may be interpreted that tribal failure students in comparison to pass students are significantly low in

their mean scores on fluency, flexibility and total verbal creative thinking. Also, it may be inferred that tribal failure students are significantly low in originality, redefinition and total non-verbal creative thinking than the pass group of students. The studies by Torrance (1960), Passi (1971), Mehta (1977), Vijay Lakshmi (1980), Singh (1981) and Passi et al. (1982) have revealed that academic achievement is positively and significantly related with the dimensional as well as total verbal and non-verbal creative thinking of students.

3-3 COMPARISON OF TRIBAL FAILURE ANDPASS GROUPS OF STUDENTS ON NON-COGNITIVE VARIABLES

The significance of difference between mean performance of failure and pass groups of tribal students on the selected non-cognitive variables of age (in months), socio-economic status, personality adjustment, general anxiety, test anxiety, study habits, security-insecurity, self-concept and personality needs was tested separately as described below :

3-3.1 Age

The mean age (in months) of the tribal failure and pass groups of students alongwith standard deviation, standard error of difference between means and t-ratio is given in the table 3.4.

Table 3.4

Mean Age (in months), Standard Deviation, Standard Error of Difference Between Means and t-Ratio for Failure (N=109) and Pass (N=126) Tribal Groups

Variable	Group	M	SD	SE_{dm}	t
Age	Failure	194.62	10.28	1.57	10.24*
	Pass	178.54	13.67		

*Significant at .01 level

The Table 3.4 reveals that mean age of failure students is 194.62 months and that of pass students 178.54 months. The t-ratio, as given in the Table, came out to the 10.24 which is significant at .01 level. The hypothesis 'The tribal students who had failed consistently in middle/matriculation examination will differ from those who had passed the middle/matriculation examination in the first or second attempt on the non-cognitive variable of age(in months) was accepted.

Interpretation

The tribal failure students, on an average, are more than 16 years old as compared to the tribal pass students who on an average, are less than the age of 15 years. From this, it may be interpreted that the tribal pass students are younger than the failure students. In other words, it may be said that age has debilitating effect on the academic achievement of the students in tribal situations.

3-3.2 Socio-Economic Status

The mean scores of the tribal failure and pass students on the socio-economic status scale alongwith their standard deviations, standard error of difference between means and t-ratio are given in the Table 3.5.

Table 3.5

Mean, Standard Deviations, Standard Error of Difference Between Means and t-ratio for Failure (N=109) and Pass (N =126) Tribal Groups on Socio-Economic Status

Variable	Group	M	SD	SE_{dm}	t
Socio-Economic Status	Failure	20.72	7.31	0.94	3.35*
	Pass	23.87	6.95		

*Significant at .01 level

It is evident from the Table 3.4 that the mean score of the failure group of students is 20.72 whereas in case of the pass group it came out to be 23.87. The t-value testing the significance of difference between the two means came out to be 3.35 which is significant at .01 level. Thus the hypothesis that the tribal students who had failed consistently in the public examinations differ in socio-economic status from those who had passed these examinations in the first or second attempt was accepted.

Interpretation

It may be interpreted from the above results that the failure students have significantly lower socio-economic background than the pass students in the tribal communities. It is worthmentioning

that in case of non-tribal students of Himachal Pradesh, Singh (1981) also found that the academic achievement is positively and significantly related with socio-economic status. Menon (1973), Anand (1973) and Lambhate (1974), in their studies found that high achievers tend to belong to high status families than the low achievers.

3-3.5 Personality Adjustment

The mean scores and standard deviations of the failure and pass groups of tribal students on emotional, social, educational and total adjustment alongwith standard error of difference between means and t-ratios are given in the Table 3.5 .

Table 3.5

Means, Standard Deviations, Standard Error of Difference Between Means and t-Ratios for Failure (N=109) and Pass (N=126) Tribal Groups on Personality Adjustment

Variable	Group	M	SD	SE_{dm}	t
Emotional	Failure	7.27	3.22	0.38	7.16*
	Pass	4.55	2.37		
Social	Failure	8.43	2.75	0.37	6.95*
	Pass	5.86	2.93		
Educational	Failure	8.64	3.05	0.36	6.75*
	Pass	6.21	2.42		
Total Adjustment Score	Failure	24.32	8.19	1.03	7.49*
	Pass	16.62	7.44		

*Significant at .01 level.

The Table 3.5 shows that the mean score of the tribal failure students on emotional, social, educational, and total adjustment are 7.27, 8.43, 8.64 and 24.32 respectively are higher than the respective mean scores of 4.55, 5.86, 6.21 and 16.62 of the pass group of tribal students. The table further shows that the t-ratios came out to be 7.16, 6.95, 6.75 and 7.49 for emotional, social, educational and total adjustment respectively which are significant at .01 level. Thus the hypothesis that the tribal students who had failed consistently in the public examinations differ in personality adjustment from those who had passed these examinations in the first or second attempt was accepted.

Interpretation

Since the mean scores of tribal failure students are significantly higher on emotional, social, educational and total adjustment, in comparison to the tribal pass students, it may be inferred that the adjustment of the tribal failure students in these areas is poor as compared to their pass counterparts. The studies by Dhaliwal (1971) and Saxena (1979) have also found academic achievement and adustment to be negatively related. It is noteworthy that Dutt (1978) and Chander (1982), in their studies on the non-tribal populations in Himachal Pradesh, found high achievers to be well adjusted in comparison to low achievers who turned out to be having poor adjustment.

3-3.4 General Anxiety and Test Anxiety

The significance of difference between mean general and test anxiety scores of failure and pass groups of students was tested by

applying t-test. The results are presented in the Table 3.6.

Table 3.6

Means, Standard Deviations, Standard Error of Difference Between Means and t-Ratios for Tribal Failure (N=109) and Pass (N=126) Groups on General and Test Anxiety

Variable	Group	M	SD	SE_{dm}	t
General Anxiety	Failure	30.47	10.35	1.46	3.62*
	Pass	25.18	12.07		
Test Anxiety	Failure	16.83	5.44	0.70	3.40*
	Pass	14.45	5.29		

*Significant at .01 level.

The Table 3.6 shows that the failure group of tribal students with means scores of 30.47 and 16.83 on general anxiety and test anxiety respectively are higher than the respective mean scores of 25.18 and 14.45 of their pass counterparts. The t-ratios for testing the significance of difference between the means on general and test anxiety came out to be 3.62 and 3.40 which are significant at .01 level. Thus the hypothesis that the tribal students who had failed consistently in Middle/Matriculation examination will differ from those who had passed the Middle/Matriculation examination in the first or second attempt in general anxiety and test anxiety.

Interpretation

The significant higher mean scores of failure students on general and test anxiety in comparison to pass students are indicative of the fact that the tribal failure students are, on an

average, more anxious in general as well as under testing situations. These findings are in line with the earlier studies of Pandit (1970) and Harmohan (1981). Furthermore, Singh (1981), in his study on a sample of non-tribal high school students of Himachal Pradesh, found that test anxiety is negatively and significantly related with academic achievement.

3-3.5 Study-Habits

The means and standard deviations of the failure and pass groups of tribal students on different areas of study habits, namely, home environment and planning of home task, reading and comments, planning of distribution of time for different school subjects, concentration in studies , planning for examination preparation, habits and interests and school environment alongwith the standard error of difference between means and t-ratios are given in the Table 3.7.

Table 3.7

Means, Standard Deviations, Standard Error of Difference Between Means and t-Ratios for Failure (N=109) and Pass (N=126) Trial Groups on Different Dimensions of Study Habits

Variable	Group	M	SD	SE_{dm}	t
Home Environment	Failure	24.45	4.39	0.54	11.50*
	Pass	30.66	3.87		
Reading and Comment	Failure	28.28	5.02	0.64	4.31*
	Pass	31.04	4.66		
Distribution of Time for Different School subjects	Failure	15.33	3.24	0.43	8.40*
	Pass	18.94	3.31		
Concentration in Studies	Failure	9.65	2.99	0.37	17.46*
	Pass	16.11	2.68		
Planning for Examination Preparation	Failure	13.54	3.27	0.47	11.04*
	Pass	18.73	3.95		
Habits and Interests	Failure	23.17	3.84	0.53	7.96*
	Pass	27.39	4.21		
School Environment	Failure	15.31	2.95	0.37	6.30*
	Pass	17.64	2.64		
Total Study Habits'Score	Failure	129.73	24.35	3.10	9.93*
	Pass	160.51	22.87		

*Significant at .01 level.

The Table 3.6 shows that the means scores of the failure students are 24.45, 28.28, 15.[illegible]3, 9.65, 13.54, 23.17, 15.31, and 129.73 on the dimensions of study habits, namely, home environment, reading and comments, distribution of time for different school subjects, concentration in studies, planning for examination preparation, habits and interests, school environment and total study habits respectively. The respective score for pass group of tribal students are 30.66, 31.04, 18.94, 16.11 , 18.73, 27.39, 17.64 and 160.51 which are higher than those of the failure group of students. The t-values, comparing the difference between the two groups on these dimensions as well as total study habits score came out to be 11.50, 4.31, 8.40, 17.46, 11.04, 7.96, 6.30 and 9.93 respectively which are significant at .01 level. Thus, the hypothesis that the tribal students who had failed consistently in the public examinations differ in their study habits from those who had passed these examinations in the first or second attempt was accepted.

Interpretation

From this, it may be inferred that the tribal failure students in comparison to the tribal pass students, seem to be have poor home environment, poor reading and comments, lack of planning in the distribution of time for different school subjects, lack of concentration in studies, no proper planning for preparation of the examinations, lack of interests in the academic subjects and non-congenial school environment. In other words, it may be said that the tribal failure students have, on the whole, poor study habits in comparison to the tribal pass students. In their studies,

Adaval et al. (1961), Rao (1965), Saxena (1972), Tiwari & Rai (1976), Sharma (1981) and Patel (1981) have also pointed out that low achievers have poor study habits in comparison to the high achievers.

3-3.6 Security-Insecurity

The means and standard deviations of the tribal failure and pass students on security-insecurity scale alongwith the standard error of difference between means and t-ratio are presented below in the Table 3.8.

Table 3.8

Means, Standard Deviations, Standard Error of Difference Between Means and t-Ratio for Failure (N=109) and Pass (N = 126) Tribal Groups on Security-Insecurity

Variable	Group	M	SD	SE$_{dm}$	t
Security-Insecurity	Failure	164.24	18.75	2.31	6.70*
	Pass	148.76	16.33		

*Significant at .01 level

The Table 3.8 reveals that the failure students have mean score of 164.24 as compared to 148.76 of the pass group of students on security-insecurity. The t-value comparing these two groups came out to be 6.70 which is significant at .01 level. Thus the hypothesis that the tribal students who had failed consistently in public examinations differ on the dimension of security-insecurity from those who had passed these examinations in the first or second attempt was accepted.

Interpretation

From the above result, it may be interpreted that the mean score of the tribal failure students is significantly higher than the tribal pass students on security-insecurity scale. In other words, the tribal failure students seem to more insecure than their pass counterparts. It is worthmentioning that the results of the studies by Saxena (1972) and Sharma (1981) are in conformity with the results of the present study.

3-3.7 Self-Concept

The means, standard deviations of tribal failure and pass students on the variable of self-concept alongwith the standard error of difference between means and t-ratio are given in the Table 3.9.

Table 3.9

Means, Standard Deviations, Standard Error of Difference Between Means and t-ratio for Failure (N=109) and Pass (N=126) Tribal Groups on Self-Concept

Variable	Group	M	SD	SE_{dm}	t
Self-Concept	Failure	78.07	10.59	1.50	4.19*
	Pass	84.35	12.36		

*Significant at .01 level.

From the above Table, it is evident that the failure students have mean score of 78.07 in comparison to pass students' means score of 84.35. The t-value comparing the two groups of tribal students came out to be 4.19 which is significant at .01 level. Thus, the

hypothesis that the tribal students who had failed consistently in public examinations differ in self-concept from those who had passed these public examinations in the first or second attempt was accepted.

Interpretation

Since the mean score of tribal failure students is significantly lower than the tribal pass students on self-concept, it may be inferred that the failure students are low on the scale of self-concept than their pass counterparts. It is noteworthy that the earlier studies by Saxena (1972), Tiwari and Rai (1976), Sharma (1981) and Harmohan (1981) have also found out that there is a significant positive relationship between academic achievement and self-concept.

3-3.8 Personality Needs

The means and standard deviations of the failure and pass groups of tribal students on the personality needs alongwith standard error of difference between means and t-ratios are given in the Table 3.10.

Table 3.10

Means, Standard Deviations, Standard Error of Difference Between Means and t-Ratios for Failure (N=109) and Pass (N=126) Tribal Groups on Personality Needs

Need	Group	M	SD	SE_{dm}	t
Achievement	Failure	10.23	3.90	0.53	6.76*
	Pass	13.78	4.24		
Deference	Failure	8.96	2.64	0.37	4.92*
	Pass	7.14	3.08		
Abasement	Failure	7.52	2.63	0.33	4.67*
	Pass	5.98	2.44		
Autonomy	Failure	6.57	2.69	0.40	3.93*
	Pass	8.14	3.38		
Aggression	Failure	5.93	2.13	0.33	1.06
	Pass	6.28	2.85		
Dominance	Failure	5.07	2.31	0.31	2.97*
	Pass	5.99	2.47		
Nurturance	Failure	6.16	2.18	0.29	2.83*
	Pass	6.98	2.29		
Succorance	Failure	5.92	2.64	0.33	2.70*
	Pass	5.03	2.32		
Affiliation	Failure	4.46	2.76	0.35	0.63
	Pass	4.68	2.49		
Counteraction	Failure	4.19	2.37	0.34	3.29*
	Pass	5.31	2.85		

*Significant at .01 level

From the Table 3.10, it is evident that the mean scores of tribal failure students are 10.23, 8.96, 7.52, 6.57 5.93, 5.07 , 6.16, 5.92, 4.46 and 4.19 on the needs for achievement, deference, abasement, autonomy, aggression, dominance, nurturance, succorance, affiliation and counteraction respectively as compared to the respective mean scores of 13.78, 7.14, 5.98, 8.14, 6.28, 5.99, 6.98, 5.03, 4.68, and 5.31 of the tribal pass students. The Table further shows that the t-values comparing the two groups on these needs came out to be 6.76, 4.92, 4.67, 3.93, 1.06, 2.97, 2.82, 2.70, 0.63 and 3.29 respectively. All these t-values, except for the needs of aggression and affiliation, are significant at .01 level. Thus the hypothesis that the tribal students who had failed consistently in public examinations differ in personality needs (except in the needs of aggression and affiliation) from those who had passed these examinations in the first or second attempt was accepted.

Interpretation

The significant higher mean scores of tribal failure students in comparison to the pass students on needs for deference, abasement and succorance are indicative of the fact that they : i) yield more easily to the influence of other; ii) conform to customs; iii) belittle their own self; iv) seek sympathetic aid of others for gratification of their needs; and v) are resigned to the fate. Furthermore, the significantly lower mean scores of tribal failure students on the needs for achievement, autonomy, dominance, nurturance and counteraction than the pass

students indicate that the tribal failure students are not able to : i) accomplish something difficult, ii) break out of confinment, iii) resist coercion and restriction; iv) control one's human environment; v) convince the others of the rightness of one's opinion; vi) give sympathy and gratify the needs of a helpless; vii) make-up for a failure by restiving; and viii) maintain self-respect and pride on a high level. It is worthmentioning that Tiwari and Rai (1976) and Lall Chand (1981) have also found high achievers to be having higher need-achievement than the low achievers.

3-4 CASE STUDIES OF TRIBAL FAILURE STUDENTS

The case study method was employed by making use of Rorschach Psycho-Diagnostic Test to study, in depth, certain personality characteristics of some significant extreme cases in the failure and pass groups of tribal students. For this purpose, the Rorschach responses obtained by the extreme cases in the two groups were quantitatively and qualitatively analysed. The relationship among certain Rorschach components were calculated on the basis of their average performance. These relationships, taken together, gave an integrated picture or total configuration of their personality.

3-4.1 Tribal Failure Students

The Rorschach record of the failure students alongwith the relationship among factors is presented in the Table 3.11 and Figure 3.1.

Table 3.11

The Rorschach Record Alongwith Relationship Among Factors of Tribal Failure Groups (N=33)

Location			Determinants			Contents		
W	=	65	M	=	68	H	=	63
D	=	92	FM	=	103	(H)	=	9
d	=	189	m	=	14	(Hd)	=	20
Dd	=	67	k	=	35	AH	=	3
S	=	5	K	=	29	A	=	178
W	=	14	FK	=	4	(A)	=	19
			F	=	97	Ad	=	85
R	=	432	Fc	=	9	Aobj.	=	14
			c	=	4	Food	=	12
			C'	=	8	Pl.	=	29
			FC	=	16			
			FC'	=	4			
			CF	=	4			
			CF	=	22			
			CF'	=	9			
			C'F	=	3			
			C	=	7			

Relationship Among Factors

Total Responses (R) = 432

Total Time (T) = 519 minutes

Average Time per response (T/R) = 1.20 minutes

$\frac{\text{Total F}}{R} = 22.45\%$

$\frac{FK+F+Fc}{R} = 25.46\%$

$\frac{A+Ad}{R} = 60.88\%$

$\frac{H+Hd}{R} = 19.21\%$

$(H+A):(Hd+Ad) = 241:105$

$\text{Sum } C = \frac{FC+2CF+3C}{2} = 40.5$

M: Sum C = 68:40.5

FM+m: Fc+c+C' = 117:17

W:M = 65:68

M:FM = 68:103

M:FM+m = 68:117

W = 15.70%

D = 21.30%

d = 43.75%

Dd = 15.50%

S = 1.16%

W = 3.24%

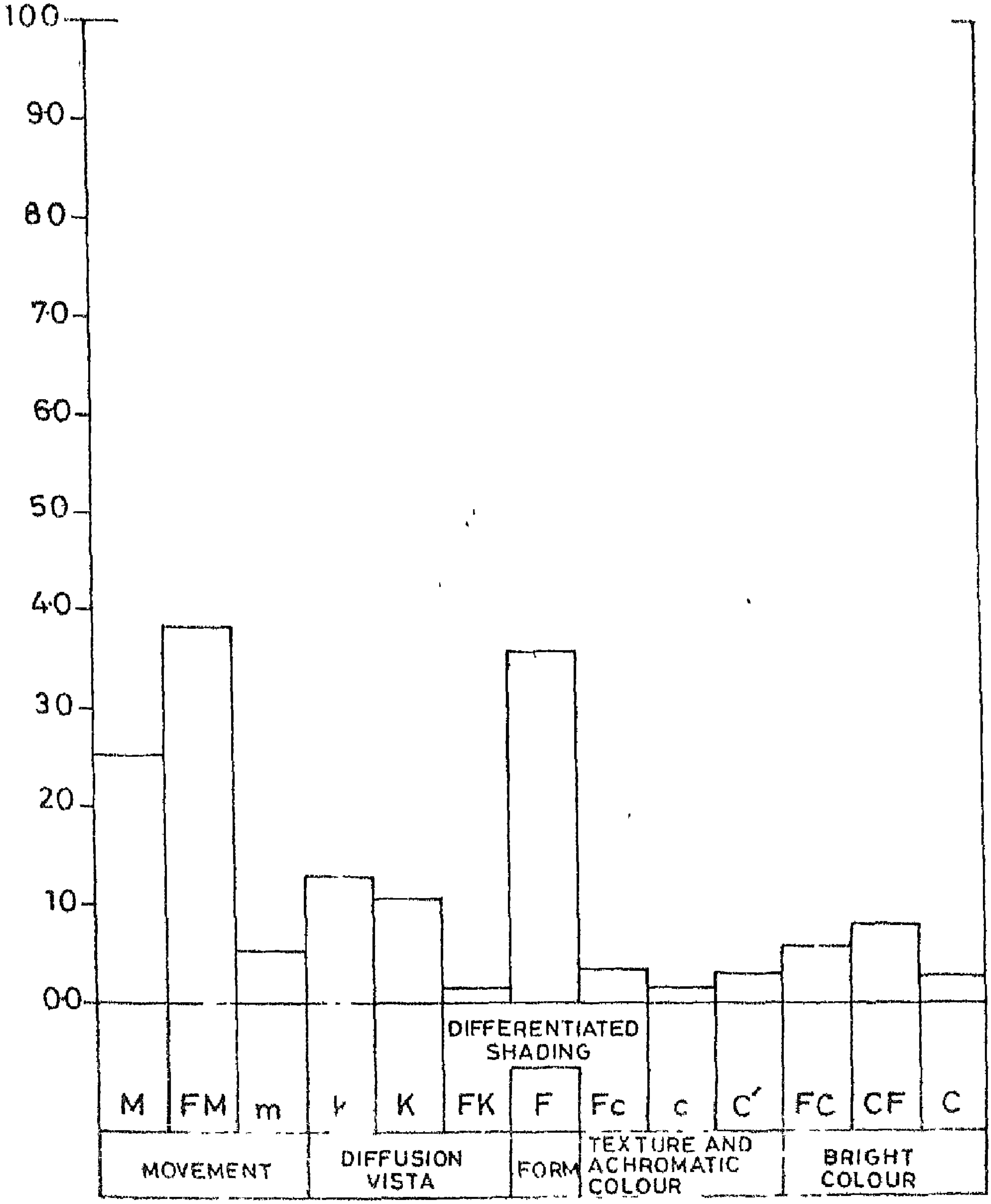
No. of [illegible]+ = 12

Interpretation

Following important indications are revealed from the Rorschach record of the extreme cases among the Tribal failure group

1. Low degree of responses by the tribal failure students (R= 432) indicates the lack of productivity of thought or low

FIG.31 PSYCHOGRAM OF TRIBAL FAILURE STUDENTS



intellectual ability. These students took, on an average, more then one minute (T/R= 1.20 minutes) which indicates slow mental process.

2. The involvement of wholes, while responding to the blots, is quite low (W = 25.70%) alongwith the presence of 3.24% W̸ responses indicates the lack of organisational ability. In other words, the tribal failure students lack the ability of viewing relatively separate factors of their experiences as a whole. These students have made lesser use of large usual details (D=21.30%) than the small usual details (d = 43.75%) which shows that such type students are lost in petty details, lack insight and understanding of the problems and have the feeling of insecurity. Presence of only a few white space responses (S =1.16%) is indicative of the fact that these failure students are not stubborn and self-assertive.

3. Content analysis of the protocol reveals that large number of animal responses (A = 60.88%) have been produced by the tribal failure students which points out that these students are childish and that they lack rich human experiences. The predominance of animal responses over human responses (H+Hd: A+Ad:: 83:263) also proves that these students are intellectually and emotionally immature. Other content categories are also not well spread (H+A: Other contents 1:H+A:8) which is the sign of narrow range of interests among the tribal failure students and lack of flexibility in their approach.

4. Presence of only a few positive original responses ($O^+ = 12$) indicates very low level of originality in the tribal failure students in their approach towards life.

5. The low production of form responses (F = [illegible].45%) indicates lack of adjustability and the ability to perceive the situation and concretize the experience. The control factor of 'Fc' is present but only in a small number and the low percentage of 'FK+F+Fc' responses which came out to be 25.46% corroborates the above findings.

6. The tribal failure students have elicited a large number of animal movement responses as compared to human movement responses (M:FM: 68:103). This means that the tribal failure students lack rich inner life and creative potential. The ratio of human movement responses to animal and inanimate responses (M:FM+m: 68:117) also indicates that these failure students seem to be ruled by immediate impulses for gratification than by the long range goals.

7. The ratio of human movement responses with bright colour responses (M: Sum C :: 68:40.5) and that of animal and inanimate movement responses with texture and achromatic colour responses (FM + m : Fc + c + C' :: 117:17) show that the tribal failure students have introversive tendencies which is further evident from the low production of responses to last three cards, i.e. cards 'VIII, IX & X' (18.29%).

8. The responses involving wholes are less than twice the human movement responses (W:M:: 65:68) which indicates that the tribal failure students have the inclination to lose themselves in their own imagination and that they are not able to utilize their imagination for creative purposes.

9. Presence of a good number of 'm' and 'K' responses, implying diffusion with no form, indicates that the tribal failure students

have free floating anxiety and adjustment problems.

3-4.2 Tribal Pass Students

In order to establish the differences in the personality make-up of the tribal failure students, the case studies were also conducted on the group of pass students so as to seek the necessary information for studying the differential personality characteristics of the two groups of students.

The Rorschach record of the pass group of tribal students alongwith relationship among factors in presented in the table 3.12 & Figure 3.2.

Table 3.12

The Rorschach Record Along with Relationship Among Factors of Tribal Race Group (N = 33)

Location			Determinants			Contents		
W	=	348	M	=	1233	H	=	208
D	=	402	FM	=	181	(H)	=	56
d	=	96	m	=	28	Hd	=	107
Dd	=	125	k	=	12	AH	=	9
S	=	50	K	=	8	Hobj	=	32
R	=	971	FK	=	59	A	=	4
			F	=	306	Sex	=	35
			Fc	=	64	A	=	48
			FC	=	37	(A)	=	15
			CF	=	31	Ad	=	32
			C	=	12	A.At	=	3
						Food	=	41
						N	=	62
						Geo.	=	73
						Pl.	=	80
						Bot.	=	111
						Obj.	=	10
						Arch.	=	25
						Art.	=	14
						Abs.	=	6

Relationship Among Factors

Total Responses (R) = 971

Total Time (T) = 958 minutes

Average time per response (T/R) = 0.99 minutes

$\frac{\text{Total F}}{R}$ = 31.51%

$\frac{FK+F+Fc}{R}$ = 44.18%

$\frac{A+Ad}{R}$ = 7.21%

$\frac{H+Hd}{R}$ = 32.44%

(H+A) : (Hd+Ad) = 256:139

Sum C = $\frac{FC+2CF+3C}{2}$ = 67.50

M : Sum C = 233:67.5

FM+m : Fc+c+C' = 109:64

W : M = 338:233

M:FM = 233:181

W = 34.81%

D = 37.28%

d = 9.89%

Dd = 12.87%

S = 5.15%

No. of O^{+} responses = 34

Interpretation

The Rorschach protocol of the tribal pass students reveals following important indications:

1. A large number of responses (R=971) were elicited by the tribal pass students which is indicative of the fact that the pass students have good production of thoughts. In other words, they have good intellectual ability which is also evident from the time taken by them in responding to the blots (T/R=0.99 minutes).

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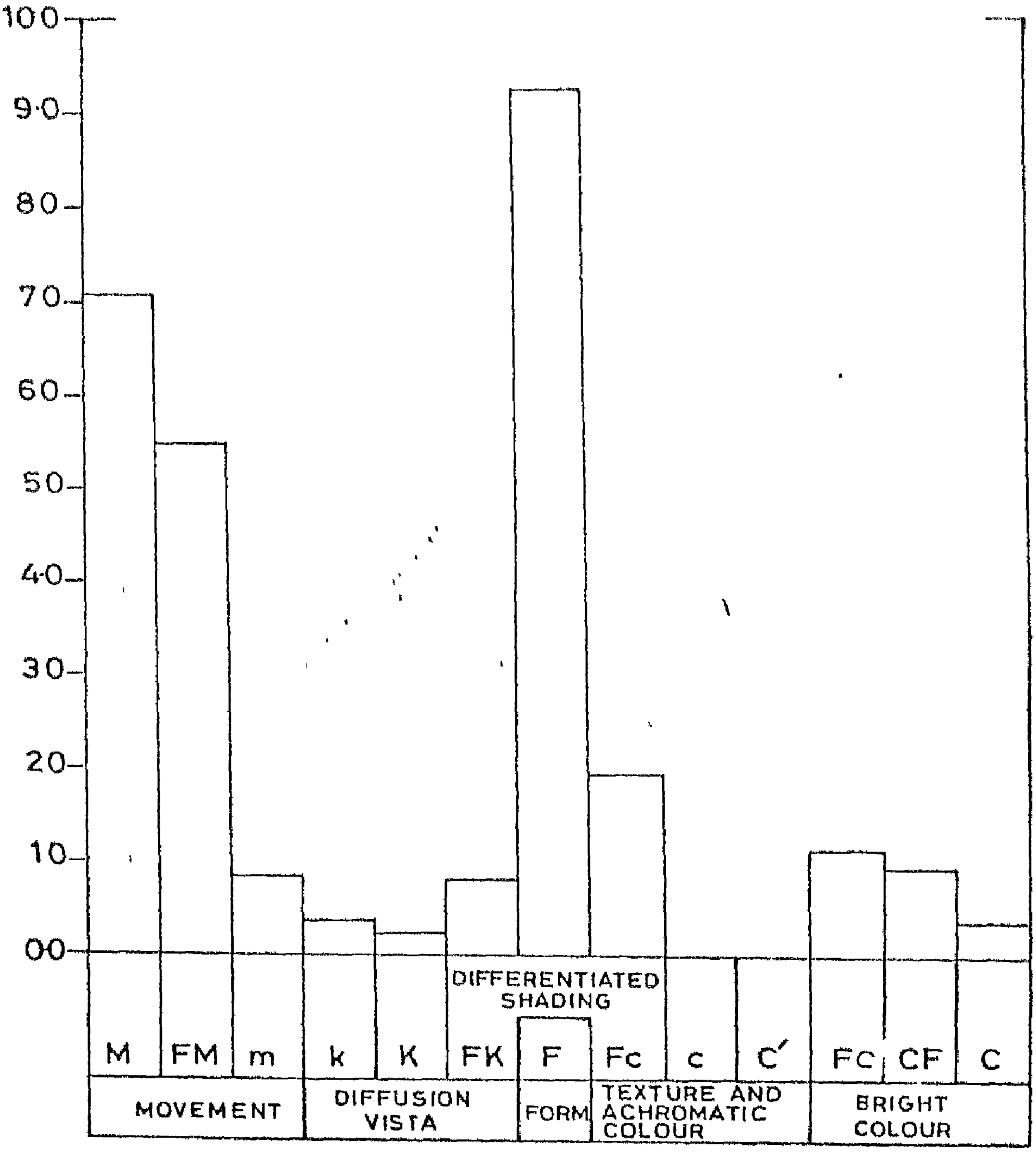
FIG 3·2 PSYCHOGRAM OF TRIBAL PASS STUDENTS



2. The involvement of wholes in moderate number (W= 34.81%) indicates the organisational ability among the tribal pass students. There has been usage of equally good number of large usual details (D = 37.28%) which is further evident of the fact that these tribal pass student are capable of viewing relatively separate factors of their experiences as a whole. These students have made little use of small usual details (d=9.89%) as well as small unusual details (Dd = 12.87%). Further, the subjects have elicited a good number of white space response (S=5.15%) whose presence indicates oppositional tendency in the intellectual sphere. In other words, the tribal pass students seem to be stubborn and self-assertive.

3. Content analysis of the protocol reveals that there are only a small number of animal movement responses (A = 7.21%) which indicates that the tribal pass students are intellectually and emotionally mature and do not have a stereotyped view of the world. The human responses outnumber the animal responses which further indicates (H+Hd: A+Ad: 315:80) that the tribal pass students are not childish and immature but possess rich human experience. A good coverage of content categories other than human and animal like, anatomy, food, nature, geography, plants, botany, objects architecture and abstracts (H+A: other contents :: H+A:18) indicates that these pass students have wide range of interests and flexibility of approach which contributes to the efficiency of intellectual functioning.

4. Presence of 34 positive original responses shows the originality of the tribal pass students. In other words, these

students are capable of eliciting some responses which none else in the group can.

5. Moderate number of form responses (F = 31.5%) alongwith the presence of control factors like FK & Fc in good number (FK+F+Fc = 44.18%) shows that the tribal pass students are well adjusted, able to concretize the experience they have, and also have good perception of the situation.

6. The human movement responses which are good in number are in optimal relationship with animal movement responses (M:FM: 233:181). This indicates that the tribal pass students have rich inner life and creative potential. Moreover, the ratio of human movement responses with animal and inanimate movement responses (M:FM+m:: 233:209) also indicates that these students are not ruled by immediate impulses for gratification but by long range goals.

7. The ratio of human movement responses with bright colour responses (M:Sum C :: 233: 67.5) and that of animal and inanimate movement responses (FM+m: Fc+c+C' :: 209:64) show that the tribal pass students tend to be introvert but seem to possess ambivalent balance as is evident from their responses to cards 'VIII,IX & X' (32.75%).

8. The responses involving wholes are less that twice the human movement responses (W:M::338:233) which indicates that the tribal pass students have high level of aspiration but are unable to utilize their creative potential to its full capacity.

3-4.3 Quantitative Analysis of Rorschach Variables of Tribal Failure and Pass Groups of Students

In order to arrive at certain conclusions and to draw some generatilizations regarding the personality characteristics of tribal failure and pass students, it was thought worthwhile to compare the Rorschach variables and the relationship among factors in the two groups of the students. The average performance of the two groups of tribal students on Rorschach variables of location, determinants and contents, and the relationship among factors are presented in the Table 3.13.

Table 3.13

Rorschach Components and Relationship among Factors Occuring among Tribal Failure and Pass Groups (Average Performance)

Rorschach Components	Failure (N=17)	Pass (N=33)
R	16.00	29.42
W%	15.50%	34.81%
D%	21.30%	37.28%
d%	43.75%	9.89%
Dd	15.50%	12.87%
S%	1.16%	5.15%
DW%	3.24%	--
O^+	0.44	1.03
M	2.52	7.06
FM	3.81	5.48
FM+m	4.33	6.33
Sum C	1.50	2.05

F%	22.45%	31.51%
FK+F+Fc%	25.46%	44.10%
A%	60.88%	7.21%
H%	19.21%	32.44%
%of R to Cards 'VIII, IX & X'	18.29%	32.75%
Relationship Among Factors		
T/R	1.20 minutes	0.99 minutes
W:M	2.41:252	10.24:7.06
M:FM	2.52:3.81	7.06:5.48
M:FM+m	2.52:4.33	7.06:6.33
M:Sum C	2.52:1.50	7.06: 2.05
FM+m: Fc+c+C'	4.33: 0.63	6.33:1.94
H+Hd:A+Ad	3.07: 9.74	9.55: 2.42
H+A: Other Contents	H+A:8	H+A:18

Interpretation

The Table 5.14 reveals that the tribal failure students have elicited, on an average, lesser responses (16.00) in comparison to 29.42 responses by their pass counterparts. Also, the tribal failure students have taken comparatively more time than the pass students (1.22: 0.99). This indicates that the tribal failure students are low in their intellectual abilities than their pass counterparts. Furthermore, the pass tribal students have elicited, on an average, more than twice positive original responses than the tribal failure students (0.44: 1.03) which is indicative of the fact that the tribal

failure students are low in their creative potential. These results are in conformity with the earlier findings of the study that the failure students are low in their intelligence and creative thinking than the tribal pass students.

The Table 5.13 also reveals that the tribal failure students who have given 15.50% whole involving responses as compared to 34.18% of the pass tribal students which indicates that lack the organisational ability i.e. the ability to view the separate facetes of experience as an integrated and interrelated whole. The tribal failure students have elicited only 1.16% white space responses(S) while the pass students elicited 5.15% such responses which shows that the failure students have no oppositional tendency in their intellectual sphere and are very much conventional.

The tribal failure students have given 21.30% large usual detail involving responses (D) and 43.75% small usual detail involving responses (d) as compared to 37.28% and 9.89% of such responses by their pass counterparts. This overemphasis on small usual details on the part of the tribal failure students indicates that they are lost in petty details instead of solving the problem as a whole and are having comparatively high degree of insecurity.

More stress on animal responses (A=60.80%) by the tribal failure students in comparison to the pass students (A = 7.21%) indicates that these students are childish and lack rich human experience. The predominance of animal responses over huamn responses in case of the tribal failure students (H+Hd: A+Ad:: 3.07: 9.74) shows that the tribal failure students in comparison to pass

group are immature, both intellectually and emotionally. Other content categories are also not well spread (H+A: other contents:: H+A:8) in case of tribal failure students which indicates that these students have narrow range of interests.

The low production of form responses (F=22.45%) and the presence of only a few control factors (FK+F+Fc= 25.46%) as compared to 31.51% and 44.18% of such type of responses by the tribal pass students indicates that the tribal failure students have poor preception of the situation. Furthermore, they are not able to concretize their experiences and are maladjusted in comparison to pass group of tribal students.

The tribal failure students have elicited more animal movement responses than the human movement responses (M:FM::2.52: 3.81), whereas the tribal pass students have laid more stress on human movement response (M:FM::7.06:5.48). This indicates that the tribal failure students, in comparison to the tribal pass students, seem to be ruled by impulse for immediate gratification, and lack rich inner life and creative potential.

The tribal failure students have elicited lesser bright colour responses than the human movement responses (M:Sum C::2.52: 1.50) and only 18.29% responses to cards VIII, IX & X whereas, the tribal pass students have elicited such type of responses in the ratio of 7.06:2.05, and 32.75% responses to cards VIII, IX & X. From this, it may be inferred that the tribal failure students are more introvert than the tribal pass students.

The responses involving wholes are less than twice the human movement responses in case of tribal failure students (W:M::2.41:2.52) as compared to the ratio of 10.24:7.06 for the tribal pass students. This shows that though the level of aspiration is high for both the groups, the tribal failure students seem to be lost in their own imagination and are not able to utilize their imagination for creative purposes.

From the discussion of the quantitative analysis of the case studies of the tribal failure and pass students, it may be concluded that the tribal failure students, in comparison to the pass students are low in their intellectual abilities, and are neither stubborn nor self-assertive. Further, they were found to be conventional in their approach, emotionally immature and maladjusted with free floating anxieties. They were also found to be lacking the ability to concretize their experiences, rich human life and ability to utilize their imagination for creative purposes.

CHAPTER IV

GENERAL CONCLUSIONS AND EDUCATIONAL IMPLICATIONS .

4-1 INTRODUCTION

In the light of the interpretations of the results of the present study, already discussed in the previous chapter, the following general conclusions alongwith educational implications may be laid down:

4-1.1 Conclusions

1. The tribal failure students were significantly low in their verbal intelligence than the pass tribal students.

2. The tribal failure students did not differ significantly from their pass counterparts in non-verbal intelligence.

3. The tribal failure students were significantly low on verbal and non-verbal creative thinking than the pass group of tribal students.

4. The average age of the tribal failure students was found to be significantly higher than their pass counterparts.

5. The tribal failure students were found to be belonging to low socio-economic status as compared to the pass tribal students.

6. The tribal failure students were found to be less adjusted than the pass group of tribal students in the areas of emotional, social and educational adjustement.

7. The tribal failure students were found to be significantly more anxious in the general as well as in the testing situations than the pass students.

8. The tribal failure students were found to (i) have poor home environment, (ii) lack the ability to read and comment, (iii) have no proper planning of distribution of time for different school subjects, (iv) lack concentration in studies, (v) have no proper planning for examination preparation and no interest in academic subjects and (vi) have non-congenial school environment in comparison to the pass group of students. On the whole, this indicates that the tribal failure students have poor study habits as compared to the pass tribal students.

9. The tribal failure students were found to be significantly more insecure than the tribal pass students.

10. The tribal failure students were found to be having significantly low self-concept than the tribal pass students.

11. The tribal failure students were found to be higher than the pass group of tribal students on the needs for deference, abasement and succorance, lower than their counterparts on the needs for achievement, autonomy, dominance, nurturance and counteraction, whereas no differences were found between the groups on the needs for aggression and affiliation.

12. The tribal failure students were found to be comparatively low in their intellectual and organisational ability than the pass tribal students. Also, the failure students were found to be lost in petty details, more conventional with free floating anxieties and maladjusted. Furthermore, they were found to be having low level of aspiration and lacking the ability to concretize the experiences.

and to use their creative potential. It was also revealed that the failure students have more introversive tendencies, narrow range of interests and were occupied by the impulse of immediate gratification than by the long range goals.

4-1.2 Suggestions with Educational Implications

Before discussing educational implications of the present study, it may be pointed out that the generalisations based upon this study are dependent upon the representativeness of the sample and the research tools employed, and are applicable to similar population. Moreover, greater confidence can be placed upon conclusions when applied to groups rather than to individuals. On the basis of the findings of the present study, the following educational implications for teachers, teacher-educators, educational planners and administrators working in the tribal areas of Himachal Pradesh may be laid down.

1. The cognitive factors of convergent thinking as measured by verbal and non-verbal intelligence, and divergent thinking as measured by verbal and non-verbal tests of creative thinking seem to the instrumental in the academic performance of the tribal students of Himachal Pradesh. These findings suggest that teachers working in the tribal areas of this state should try to identify the tribal children with low intelligence and low creative thinking from the early stage of their education and provide them the necessary congenial school environment for proper nourishment and growth of these abilities. To avoid the variation in the

intelligence and creative thinking among the tribal students within the classrooms, it is worthwhile to frame subgroups which are homogeneous with respect to the cognitive abilities. Imparting of classroom instruction to the tribal students in the homogeneous groups will be helpful in better learning and in overcoming the risk of inferiority complex due to low academic achievement. It is also suggested that the school teachers should make use of instructional materials which have been found to be effective in the development of combinatory thought processes which are supposed to underlie the intellectual development including creative thinking (Jarial,1984). The instructional materials include verbal content to be taken from immediate environment of the students i.e. home, school and society and non-verbal content in the form of geometrical shapes like lines, triangles, rectangles and squares to be converted into meaningful objects.

2. Since the tribal failure students were found to be older in age and low in socio-economic status than the pass students, it seems that their parents, being illiterate and poor, are not able to care for the education of their children by sending them to the school at appropriate age. Furthermore, due to economic necessity of the family, this group of students is forced to attend to the household duties like cattle grazing, wood cutting, manual work etc. before and after the school hours. This leaves little time at the disposal of these children to attend to their studies. To improve upon the situation in the tribal areas more incentives in the form of books, stipends/scholarships and dresses should be

given to such children in order to reduce to some extent the financial burden on their parents. Since there is no provision of play grounds in the schools in the hilly tribal areas with difficult terrain, some effective programmes in the form of indoor games, film shows and radio programmes etc. and nourishment programmes like midday meals should be made the integral part of the school system. Such motivational provisions will be helpful in retaining the children, especially those belonging to low socio-economic status for the stipulated school hours.

3. The tribal failure students were found to be emotionally, socially and educationally less adjusted as compared to their pass counterparts. It may be attributed to the fact that school education in the tribal areas does not suit to their culture and a gap in the expectations in the school situation on one hand and the culture on the other leads to faulty adjustment mechanism among some of them. For this, it would be worthwhile that school curriculum be related to the cultural needs and aspirations of the tribal communities.

4. It was found that the tribal failure students are tension-ridden in the general as well as in the testing situations. The economic problems of the parents with low socio-economic status contribute significantly to the general anxiety of the tribal failure students. The steps, discussed earlier should be taken by the government and other voluntary organizations to provide some concrete financial help to such families so that the general

anxiety among the tribal failure students due to financial handicaps may be reduced to some extent. Furthermore, the use of interim or formative tests during the course of instruction by the classroom teachers will be helpful in decreasing the test anxiety among the tribal failure students.

5. The tribal failure students were found to be having poor study habits. The educational administrators should make efforts to provide guidance services in the schools to inculcate better study habits among such children. Efforts should also be made to establish community education centres in the tribal areas with the facilities of radio, television, newspapers and other reading materials to compensate for the poor home environment. These facilities will be helpful in the education of the tribal illiterate parents which in the long run will contribute in increasing the awareness among the parents about the education of their children. Such an awareness among the parents will facilitate the academic performance of the tribal students as has been pointed out by Singh (1983) that parental support compensates the disadvantage of low intellectual abilities and socio-economic status in the academic achievement of their children.

6. Instructional strategies adopted by the class teacher help in increasing retention and better learning of the students. It is noteworthy to mention that Corey et al. (1970) Corey et al. (1971), Cooper and Creiner (1971), Anderson and Artman (1972), Nazzaro et al. (1972), Moore et al. (1973), Breland and Smith

(1974) and Austin and Gilbert (undated) have found that the personalised system of instruction (PSI) is more effective than conventional method of teaching in increasing retention which contributed to better academic performance. It may also be mentioned that Bloom's mastery learning strategy (MLS) has also been found to be effective in enhancing the retention of the students (Romberg et al., 1970; Kersh, 1971; Block, 1972; Jones, 1974; and Anderson, 1976), In Indian context, Hooda (1983, 1984) has reported that the Bloom's mastery learning strategy is more effective than the conventional method of teaching in increasing the academic performance of the students with experimental group being given a higher quality of instruction in terms of group instruction and feedback. Further, Kaundal (1981, 1984) has also reported significantly positive effect of Bloom's mastery learning and personalised system of instruction on the immediate as well as delayed retention of the students drawn from the non-tribal population of the hilly state of Himachal Pradesh thereby suggesting that these strategies help the students to retain subject material for a long time. On the basis of the findings of the research studies, discussed above, it is suggested that the teachers working in the tribal areas of Himachal Pradesh may be given certain refresher courses for getting an understanding of the mastery learning strategies so that they are able to apply them in teaching the tribal students in the state to overcome the phenomenon of poor achievement.

7. In the end it may be emphasized that interim or formative tests will be of immense use for the classroom teacher in enhancing learning of the tribal failure students. It is worthmentioning that Spitzer (1939); Sones and Stroud (1940), Morse and Wingo (1970), and Edwards and Scannell (1975) stated that well organised reviews following learning of material help to retain what has been learned. When a review is given some-time after the original learning, it could take the form of a test and will help retention (Stephens and Evans, 1977). Early investigations by Jones (1923), Hertzberg (1932) and Gable (1936) have shown that students, who were tested periodically daily or at the end of each unit of study, made slightly higher scores on final examinations and on delayed recall tests than those students who were not tested prior to the final examination. Gronlund (1976 , pp. 489-494) has also pointed out that formative evaluation procedures in the form of learning tests, quizzes, unit-tests, and the like facilitate retention by stressing complex learning outcomes and by providing opportunity to apply newly learned material. In the Indian context, Man (1981) found that unit tests, given periodically during instruction, are helpful in increasing retention of the students. In view of the importance of the interim or unit tests in the retention and learning of the subject matter by the student, teachers, both pre-service and in-service, should be given training in construction and use of such tests in the classroom situation.

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APPENDIX-I

SUMMARY OF THE DEVELOPMENT ALONGWITH SCORING PROCEDURE OF TESTS OF CREATIVE THINKING FOR HIGH SCHOOL STUDENTS OF HIMACHAL PRADESH

The tests of creative thinking, both verbal and non-verbal, measure creative thinking among high school students of Himachal Pradesh including the abilities of fluency, flexibility, originality elaboration and redefinition which are differentially distributed among the individuals.

Suitability of Test Activities

Seven verbal and seven non-verbal test activities were selected to find out their suitability in the local conditions of the hilly state of Himachal Pradesh having its own unique socio cultural background, and were administered on a sample of 175 students studying in grades VIIIth , IXth and Xth drawn randomly from nine high and higher secondary schools situated in five districts. On the basis of responses elicited by the students, four verbal and four non-verbal test activities were chosen for further development.

Preliminary Draft

The preliminary draft of verbal test included 'Seeing Problems Activity' and 'Unusual Uses Activity' with 10 items each ; 'Consequences Activity' with nine items; and 'Product Improvement Activity' with three items to be scored for fluency, flexibility and originality. The preliminary draft of non-verbal test included 'Incomplete figures Activity', 'Circles Activity' and 'Squares

Activity' with ten items each; and 'Making Objects Activity' with nine items to be scored for elaboration and originality, and redefinition for 'Making Objects Activity' only. A representative sample of 270 boy and girl students from VIIIth, IXth and Xth grades of 13 high and higher secondary schools situated in seven districts of the state was drawn for administration of the Preliminary Draft. On the basis of item analysis, computing discrimination index, for each item on each of the dimensional scores, some items were selected to be included in the Final Draft of the Test of Creative thinking, the details of which alongwith time required for are given as under :

Sr.No.	Test Activity		Total No. of Items included in the Final Draft .	Time in minutes required for completion
Verbal Test of Creative Thinking				
1.	Seeing Problems Activity		4	8
2.	Unusual Uses Activity		4	8
3.	Consequences Activity		3	9
4.	Product Imorovement Activity		1	5
Non-Verbal Test of Creative Thinking				
1.	Incomplete Figures Activity		8	8
2.	Circles Activity	Presented Together	8 circles & squares each	16
3.	Squares Activity			
4.	Product Improvement Activity		1	6

Total time Required for Administration of verbal and non-verbal tests of creative thinking is 30 minutes each ..

Reliability and Validity of Tests of Creative Thinking

Reliability and validity of the tests were established on an independent sample of 110 students studying in VIIIth, IXth and Xth grades, randomly selected from six high and higher secondary schools situated in three districts of the state.

Reliability

The test-retest reliability co-efficients for the dimensions of fluency, flexibility, originality and summated score came out to be 0.969, 0.967, 0.923 and 0.978 respectively in case of verbal test of creative thinking. In case of non-verbal test of creative thinking these coefficients came out to be 0.944, 0.930, 0.848 and 0.962 respectively for the dimensions of originality, elaboration, productivity and summated score. Spearman Brown Split-Half reliability co-efficients were also computed for the test activities of 'Seeing Problems', 'Unusual Uses', 'Consequences', 'Incomplete Figures' 'Circles' and 'Squares' which came out to be 0.872, 0.850, 0.973, 0.728, 0.783 and 0.801 respectively.

These co-efficients ranged from 0.850 to 0.973 and 0.609 to 0.801 for verbal and non verbal tests of creative thinking respectively.

Further, the inter scorer reliability co-efficients ranged from 0.988 to 0.997 for verbal and from 0.969 to 0.984 for non-verbal tests of creative thinking.

Validity

Criterion related validity indices for the dimensional and total score on verbal and non-verbal tests of creative thinking were

computed with teachers' ratings which were found to be ranging from 0.583 to 0.796 for verbal and from 0.595 to 0.667 in case of non-verbal tests. Also, the construct validity of tests of creative thinking was established by finding out correlation co-efficients of verbal, non-verbal and total creative thinking scores with 'creativity index score' on Wallach-Kogan Tests of Creativity which came out to be 0.463, 0.454 and 0.522 respectively.

Further internal consistency of verbal and non-verbal tests of creative thinking was sestablished by computing inter-item, item vs. total activity score as well as total test score and activity total vs. total score correlation co-efficients. These co-efficients of correlation ranged from moderate to high values and were found to be satisfactory in terms of internal consistency as well as factorial validity.

SCORING OF TESTS OF CREATIVE THINKING

Responses for all the seven test activities are of divergent nature. Consequently, for each test activity, a separate system of scoring had to be devised. The description of the scoring procedure for verbal and non-verbal tests of creative thinking is as under :

Scoring Pattern of Verbal Test of Creative Thinking

All the four verbal creative thinking test activities were scored item-wise on the dimensions of verbal fluency,

flexibility and originality. Summated score for each of the test activities on these dimensions as well as total verbal creative thinking are also obtained.

Fluency

Fluency is a matter of facility with which an individual retrieves items of information from his personal storage or newly acquired information sought from the environment. Fluency score is the total number of relevant and acceptable responses obtained by a subject on each of the items of four verbal tests of creative thinking.

Flexibility

Flexibility is a matter of fluidity of information or lack of fixedness or rigidity, striking out new directions. Flexibility score of a subject on each of the items is the number of categories in which his responses can be grouped.

Originality

Originality connotes novelty or uniqueness of the response, the response that is not in a standard list of frequent responses, but is away from the obvious and common place. Originality score is obtained either by counting the number of responses which are given by only one in a sample or by assigning originality weights to the responses according to their statistical infrequency. Greater the statistical rarity, higher is the originality weight of the response and vice-versa till a response is given by 5 per cent

or more subjects. In that case, the response is not considered original. Sum of such originality weights obtained by a subject on each of the items gives the originality score.

Scoring Pattern of Non-verbal Test of Creative Thinking

All the four test activities are scored for the dimensions of originality and elaboration. In addition to this, the 'Making Objects Activity' is scored for 'redefinition'. Summated scores for elaboration and originality are obtained alongwith 'redefinition' score to be added for total non-verbal creative thinking score. The description of the scoring for these dimensions is given below:

Originality

Originality weights are assigned to the completed figures or objects in the same way as is done for verbal test of creative thinking. Statistical rarity of the response is taken as the criterion for deciding the originality weights. Greater the rarity of the response, higher is the originality score for an object. A response given by more than five per cent subjects is not given any originality score.

Elaboration

Elaboration is the ability to carry out an idea i.e. to implement a big idea by adding other ideas to it. An elaboration score is obtained by counting the number of different ideas or details added to the basic idea to make the figure more complex.

Redefinition

Redefinition is generally reflected by the ability of improvising i.e. combining a number of figures out of a given set to make an interesting, original and meaningful object. It is scored by counting the number of figures used to make the object yielding productivity score.

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SUMMARY OF DEVELOPMENT OF SOCIO-ECONOMIC STATUS SCALE QUESTIONNAIRE FOR TRIBAL STUDENTS OF HIMACHAL PRADESH

A Socio-Economic Status Scale Questionnaire for Tribal Students of Himachal Pradesh was developed, both in Hindi and English, to assess the socio-economic status of these students more objectively keeping in view the local needs and requirements of the tribal society of the state. The scale consists of three components

i. Family Background
ii. Material Possessions
iii. Certain Socio-Psychological Indicators

Family Background

This part of the scale included six items pertaining to occupation, education and income of the parents/guardians, family size and education of brothers and sisters.

Material Possessions

The second part of the scale included four items seeking information about the type of the house, land, farm power and material possessions in the house.

Socio-Psychological Indicators

The last part of the scale included four items pertaining to their belief in caste system, concept of social prestige, social participation and reading of newspapers and magazines.

These different factors and their sub-parts were included in the scale by taking into consideration various aspects of the social status of the individuals, their economic activities in the society and their outlook of the life.

The categories and their weights/scores for each of the 14 items of the scale pertaining to different aspects of socio-economic status were finalised by collecting data from a randomly selected sample of 200 tribal students studying in different schools situated in the districts of Kinnaur, Chamba and Lahaul & Spiti.

The reliability and validity of the scale was determined on an independent sample of 80 students of Kinnaur, Chamba and Lahaul & Spiti districts studying in different schools as described below:

Reliability

The test-retest reliability co-efficients (Time Gap of Six Months) were computed item-wise which ranged from 0.831 to 0.896 and for total socio-economic status score which came out to be 0.803. Inter-scorer reliability co-efficients were also computed which came out to be 0.987 for total socio-economic status score and ranged from 0.923 to 0.965 in case of item-wise scores.

Validity

The validity index of the Socio-economic status Scale Questionnaire with the external criterion of Socio-Economic Status Scale (Rural) by Pareek & Trivedi (1964) came out to be 0.639.

Also, two extreme groups of tribal students were identified with 20 students in each, from these randomly selected 80 tribal students with known and established high and low socio-economic background for comparison on the scale and the biserial co-efficient of correlation was computed for the total score. It came out to be 0.816 which was statistically significant and was considered satisfactory.

NCERT PROJECT FOR
SOCIO-ECONOMIC STATUS SCALE QUESTIONNAIRE / TRIBAL STUDENTS OF HIMACHAL PRADESH

By

Dr. Lokesh Koul

Total Score	
Category	

Name .... Age ....

Name of School .... Name of Village ....

Class .... Date ....

INSTRUCTIONS

This scale seeks information about your family and its members. You are requested to give exact information about your family. There are different possible answers for each of the 14 questions included in the scale. You are to select only one answer for each question which suits you most and tick mark (✓) against it. However, in case of Question No. 10 you are to put a cross or tick mark for each of the items present in your house.

PART-I

1. What is the occupation of your Father/Guardian

a. Labour .... b. Cattle Rearing.............................

c. Caste Occupation......... d. Agriculture/Horticulture..............

e. Business................. f. Government Service ....

2. What is the educational qualification of your father/guardian ?

a. Illiterate............. b. Primary School or Literate..........

c. Middle School .... d. High School.........................

e. Intermediate/Undergraduate.... f. Graduate and Above..........

3.What is the monthly Income of your family ?

a. From Rs. 200/- to Rs. 400/-................ b.From Rs. 400/- to Rs. 600/-.....................

c. From Rs. 600/- to Rs. 800/- .... d.From Rs. 800/- Rs. 1000/-......................

e Above Rs. 1000/-..........

4.What is the size of your family ?

a. 16 or more Members ..... b. 10-15 Members ....

c. 6 - 9 Members .... d. Upto 5 Members................

5.What is the Educational Qualification of your Brother ?
(Please inform about, the education of the most educated in case of having more than one brother).

a. Illiterate .... b.Primary School of Literate........

c. Middle School........... d.High School......................

e. Intermediate/ Undergraduate........... f.Graduate and Above..............

6.What is the Educational Qualification of your Sister ?
(Please inform about the education of the most educated in case of having more than one sister).

a. Illiterate............. b. Primary School or Literate........................

c. Middle School.......... d. High School....................

e. Intermediate/ Undergraduate .... f. Graduate and Above..............

PART-II

7. What is the Type of your House ?

a. No House .... b. Hut..........................

b. Kachcha House........ d. Kachcha-Pucca House............

e. Pucca House.......... f. Mansion..................

8. How much Land you have ?

   a. No land.............. b. Less than one Acre ....
   c. 1-5 Acres .... d. 5-10 Acres........................
   e. More than 10 Acres.....

9. What about Farm Power or Animals you have ?

   a. No animal .... b. 1-2 animals ....

   c. 3-4 animals........... d. 5-6 animals....................

   e. More than 6 animals.....

10. Tick Mark (✓) the things you have in your house ?

    a. Cart type vehicle/Motorcycle or Scooter/Jeep or Car.

    b. Chair and Table/Sofa

    c. Transistor/Radio/Television

    d. Wrist Watch/Wall Clock

    e. Traditional agricultural implements/Modern agricultural implements.

PART-III

11. Do you believe in Caste System ?

    a. Yes..... b. Cannot say .... c. No.................

12. Of the following what should be the criterion to determine the social prestige of a person ?

    a. Caste .... b. Property and Economic Condition.....
    c. Occupation and Work ....

13. You participate in Social Activities in the form of Being :

    a. Member of only one social organisation

    b. Member of morethan one social organisation

    c. Office holder in the organisation or public leader.

14. Do you read Newspapers/Magazines etc ?

    a. Never..... .... b. Seldomly ....

    c. Occasionally......... d. In Routine Life.............

SCORING KEY OF SOCIO-ECONOMIC STATUS SCALE QUESTIONNAIRE FOR TRIBAL STUDENTS OF HIMACHAL PRADESH

Scoring of the scale is done item-wise as described below:

Item No.	Response Category	Weight/ Score	Item No.	Response Category	Weight/ Score
PART-I					
1	a	1	5.	a	0
	b	2		b	1
	c	3		c	2
	d	4		d	3
	e	5		e	4
	f	6		f	5
2.	a	0	6.	a	0
	b	1		b	1
	c	2		c	2
	d	3		d	3
	e	4		e	4
	f	5		f	5
			PART II		
3.	a	1	7	a	0
	b	2		b	1
	c	3		c	2
	d	4		d	3
	e	5		e	4
				f	5
4.	a	1	8.	a	0
	b	2		b	1
	c	3		c	2
	d	4		d	3
				e	4

Item No.	Response Category	Weight/Score	Item No.	Response Category	Weight/Score
9	a	0	12	a	1
	b	1		b	2
	c	2		c	3
	d	3			
	e	4	13	a	1
				b	2
10	a	1/2/3		c	3
	b	1/2			
	c	1/2/3	14	a	0
	d	1/2		b	1
	e	1/2		c	2
				d	3

PART III

11	a	1
	b	2
	c	3

The total score of a person on the socio-economic status scale is the sum of the weights/scores obtained by him on all the 14 items of the scale.

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